

REMARKS

Claims 1-3, 5, 6, 9, 10, 14, 15 and 17 are pending in this application, with claim 1 being the sole independent claim. By this Amendment, claims 4, 7, 8, 11-13 and 16 are cancelled without prejudice or disclaimer. Claim 1 is amended. No new matter is added.

I. The Brenneisen Reference Rejections

Claims 1, 3, 6 and 15 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. 4,005,350 to Brenneisen (“Brenneisen”) and claims 2, 4, 7, 8, 14 and 16 are rejected under 35 U.S.C. § 103(a) as being obvious over Brenneisen. As claims 4, 7, 8 and 16 are cancelled, rejection of those claims is moot.

Claim 1 is amended to include the subject matter of claim 4 as Brenneisen fails to disclose or suggest a circuit arrangement, comprising two series-connected switching elements in a switching path... wherein the switching elements in the switching paths are IGBTs.

Brenneisen relates to an arrangement for protecting a self-controlled polyphase bridge-type inverter utilizing controllable valves of the semiconductor type, i.e. thyristors, which is conventionally fed from the output of a rectifier. A link circuit includes at least one smoothing condenser and at least one smoothing inductance where, in the case of an ignition fault through one valve branch of the inverter bridge, all inverter valves are activated simultaneously by an igniting pulse so that the smoothing condenser in combination with the inductances of the inverter form an oscillating circuit (column 1, lines 6-21). In Brenneisen a protective circuit is provided that has an additional branch connected electrically in parallel with the smoothing condenser 7 which becomes operative only in the event of a malfunction in the inverter valving and which comprises a diode connected in series with an ohmic resistance.

It is alleged in the Office Action that the smoothing condenser 7 corresponds to the claimed intermediate circuit capacitor and is in parallel with switching paths having series connected switching elements (the load thyristors 11-16 of Brenneisen) and a short circuit thyristor 17 in parallel with the smoothing condenser 9. It is also alleged that there is a connection point between two switching elements (between thyristors 11 and 14, as shown in Fig. 1 of Brenneisen).

However, Brenneisen is silent as to the claimed switching elements being IGBTs. Although it is acknowledged in the Office Action that Brenneisen only discloses thyristors as the switching elements, it is alleged that it is “well known” in the converter art to utilize IGBTs.

Applicant respectfully reminds the Examiner that it is never appropriate to rely solely on common knowledge in the art without evidentiary support in the record, as the principle evidence upon which a rejection is based (see MPEP § 2144.03). As stated in § 2144.03 of the MPEP, “it would not be appropriate for the Examiner to take official notice of facts without citing the prior art reference where the facts are asserted to be well known are not capable of instant and unquestionable demonstration as being well known.”

In this case, it is admitted that Brenneisen only teaches the use of thyristors as the switching elements. Thus, Brenneisen fails to disclose or suggest IGBTs as switching elements in the switching paths of the short circuit protection arrangement as recited in the rejected claims. As Brenneisen is silent regarding this feature the reference cannot be relied upon to support an allegation that the feature is “well known” to those in the converter art. As pointed out *In re Zurko*¹, and reiterated in *In re Sang-Su Lee*², “deficiencies of the cited references cannot be remedied by a general conclusion about what is “basic knowledge” or “common sense.”

Further, although the Examiner alleges that it would have been obvious to utilize IGBTs for switching elements as they are allegedly more easily shut off than thyristors and may therefore be more easily protected from large volt currents, Applicant submits that prior to the current application, those of skill in the art would not have used IGBTs as switching elements for the arms of a voltage intermediate circuit converter as the IGBTs have always been assumed to be too sensitive for such a use, despite short circuit protection.

As Brenneisen fails to disclose or suggest each and every feature recited in the rejected claims, withdrawal of the rejection is respectfully requested. The rejections of 1-3, 6, 14 and 15 are respectfully traversed.

II. The Brenneisen and Chaudhry Reference Rejection

Claims 5, 9-13 and 17 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Brenneisen in view of US Patents 6,188,557 to Chaudhry. As claims 11-13 are cancelled rejection of those claims is moot. The rejection of claims 5, 9, 10 and 17 is respectfully traversed.

The pending remaining claims are allowable for their dependency on independent claim 1 and for the reasons discussed above, as well as the additional features recited therein. Moreover,

¹ 258 F.3d 1379, 1385, 59 USPQ 2d 1693, 1697 (Fed. Cir. 2001).

² 277 F.3d 1338, 1345 (Fed. Cir. 2002).

as Chaudhry fails to overcome the deficiencies of Brenneisen in that Chaudhry fails to disclose or suggest the use of IGBTs as switching elements in the switching paths, the combination of references, whether considered alone or in combination, fails to disclose each and every feature recited in the rejected claims. Accordingly, withdrawal of the rejection is respectfully requested.

CONCLUSION

In view of the above, Applicant earnestly solicits reconsideration and allowance of all of the pending claims.

Should there be any matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the telephone number of the undersigned below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,
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